Evaluation and Measurement

Photograph: Wisconsin Department of Tourism, Gary Knowles

Evaluation and Measurement

This plan recommends how Wisconsin can improve the cardiovascular health status of its residents. The goals and strategies of this plan are designed to change policies and environments so that people will have improved cardiovascular health. Everyone involved with this plan wants it to be successful, and they all want to know if they can make it even better. Finding out whether it is successful and how to make it better is called evaluation.

Evaluating Work Plan Activities

The CVH Program staff and CVH Alliance members chose goals for this plan that are important for improving heart healthy behaviors and lifestyles in Wisconsin. They then chose strategies that they believed would give the best chance for reaching the goals. A strategy is carried out through one or more activities. The authors of this plan will evaluate how successful their recommended strategies were in achieving their desired outcomes. The job of evaluation is to find out whether the goals were reached, and if they were not what could be changed so that the goals could be reached.

Three evaluation questions must be asked about each activity that is performed.

1. How was the activity expected to help reach the goal?
2. What was done to perform the activity?
3. What products or other work did the activity produce, and did it involve the right people?

These questions will be answered by collecting and examining several types of documents and other items including:

- minutes of planning meetings,
- the number and types of people involved in an activity,
- descriptions of work done, e.g., number of people contacted in a community media campaign, and
- descriptions of products produced, e.g., heart-healthy menus for school cafeterias.

The answers to these three questions will show if an activity was performed the way it was planned. The answers will also help to improve future activities. However, the answers do not tell us whether the activities had any impact on reducing heart disease and stroke.

Evaluating Improvements in Cardiovascular Health

Several questions must be asked to evaluate improvements in cardiovascular health including:

1. Have fewer people died from heart attacks, stroke, and other cardiovascular diseases?
2. Do fewer people have the major risk factors for heart attack and stroke, i.e., high levels of LDL cholesterol, high blood pressure, obesity, and tobacco use?
3. Are more people engaging in the following behaviors that help to prevent risks of cardiovascular disease:
   a. Being physically active?
   b. Eating nutritious foods in reasonable portions?
   c. Avoiding tobacco use and exposure?

To answer these and similar questions the Work Plan requires the collection of several types of information using public health methods called surveillance. Wisconsin has been conducting surveillance of heart disease and stroke information for several years. The surveillance data tables that follow show the status of cardiovascular health for Wisconsin residents, and the target levels of cardiovascular health for 2009.

In addition, the evaluation of this plan will require the collection of new information concerning changes in policies and environmental supports. The extent of these additional data collection efforts will depend heavily on the amount of resources that are devoted to these efforts.

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Data Sources

Several and varied data sources will be employed to measure and evaluate the progress of the Wisconsin Plan for Heart Disease and Stroke Prevention. Some of these are the following:

- Wisconsin Mortality Data
- Wisconsin Behavioral Risk Factor Survey (BRFS)
- Wisconsin Youth Risk Behavior Survey (YRBS)
- Wisconsin Inpatient Hospitalization Discharge Database
- Wisconsin Medicaid Program Data
- Medicare Program Data for Wisconsin
- Wisconsin Census Records and Population Estimates
- Wisconsin Family Health Survey
- Wisconsin Collaborative Diabetes Quality Improvement Project Data in HEDIS® Cardiovascular Measures
- Federally Qualified Health Centers (FQHC) pertinent collected registry data

In addition to the above data sources, the Cardiovascular Health Program will keep seeking and identifying appropriate data sources to enhance the surveillance system. Ongoing evaluation of cardiovascular-related data, using the above data sources, will allow periodic monitoring of progress toward objectives of the Wisconsin Plan for Heart Disease and Stroke Prevention.

Long-Term Cardiovascular Health Indicators

The following long-term performance measures will assist in evaluating improvements in cardiovascular health.

Reduction in Risk Factors for Cardiovascular Disease

1. Promote physical activity, adequate consumption of fresh fruits and vegetables, BMI control, and tobacco cessation to reduce CVD risks among adults and youth.

Prevalence of CVD Risk Factors in Wisconsin Adults

	Current (2003)	2009
Physical inactivity (< 30 min. moderate physical activity three times weekly)	45%	40%
Less than five fruits and/or vegetables/day	79%	70%
Adults are overweight/obese (BMI≥25)	60%	54%
Current Smoker	22%	12%

Source: Wisconsin Behavioral Risk Factor Survey 2003

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Prevalence of CVD Risk Factors in Wisconsin Youth

	Current (2003)	2009
Physical inactivity (< 30 min. moderate physical activity five times weekly)	72%	61%
Less than three fruits daily	66%	50%
Less than three vegetables daily	72%	50%
Youth overweight or at risk for being overweight	26%	20%
Current Smoker	24%	12%

Source: Wisconsin Youth Risk Behavior Survey, Division of Learning Support, Department of Public Instruction, 2003

Improved Blood Pressure Detection and Control

2. Increase by 5% the number of adults aged 18 years and older who have had blood pressure measured within the preceding two years and can state whether their blood pressure was normal or high.

Detection of High Blood Pressure in Wisconsin Adults

	Current (1999)	2009
Adults aged 18 years and older who have had blood pressure measured within preceding two years*	92.6% (1999)	> 95%

Source: * Wisconsin Behavioral Risk Factor Survey, 1999

3. Increase the number of youth aged 5-17 years who have had blood pressure measured within the preceding two years.

Detection of High Blood Pressure in Wisconsin Youth

	Current	2009
Youth aged 5-17 years old who have had blood pressure measured within preceding two years	Data source to be developed	

4. Increase by 10% the number of adults aged 18 years and older with high blood pressure who are taking appropriate action (e.g., losing weight, increasing physical activity, changing diets) to help control their blood pressure.

Control of High Blood Pressure in Wisconsin

	Current (2002)	2009
Persons with CVD event and whose blood pressure was controlled (≥ 140/90 mmHg)*	62%	68%

Source: * Health Plan Employer Data and Information Set (HEDIS), 2002

Improved Cholesterol Detection and Control

5. Increase by 10% the number of adults aged 18 years and older who have had their blood cholesterol checked within the preceding five years.

Detection of High Cholesterol in Wisconsin

	Current (2003)	2009
Adults who had their cholesterol measured within preceding 5 years*	75%	82%

Source: * Wisconsin Behavioral Risk Factor Survey, 2003

6. Reduce by 10% the number of adults aged 18 years and older who are diagnosed with high blood cholesterol levels.

Control of High Cholesterol in Wisconsin

	Current (2003)	2009
Adults had been told by healthcare professionals that have high blood cholesterol	33%	30%

Source: * Wisconsin Behavioral Risk Factor Survey, 2003

7. Among adults aged 18 years and older who have had a CVD event, increase by 10% those who have had their LDL-cholesterol level screened and controlled (< 100 mg/dL).

Control of LDL Cholesterol Among Wisconsin Residents After a CVD Event

	Current (2002)	2009
LDL screening among Wisconsin adults age 18-75 after acute CVD event	84%	92%
LDL controlled among Wisconsin adults age 18-75 after acute CVD event	69%	75%

Source: * Health Plan Employer Data and Information Set (HEDIS), 2002

8. Increase the number of youth aged 5-7 years old who have LDL cholesterol levels < 100 mg/dL.

Control of LDL Cholesterol Among Wisconsin Youth

	Current	2009
Youth aged 5-17 who have LDL levels < 100 mg/dL	Data source to be developed	
Youth aged 5-17 with diabetes who have LDL levels < 100 mg/dL	Data source to be developed	

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Reduce Cardiovascular Deaths

9. Increase the number of adults aged 20 years and older who are aware of the early warning symptoms and signs of a heart attack and the importance of accessing care by calling 911.

Awareness of Signs and Symptoms of Heart Attack and Stroke Among Wisconsin Adults

	Current (2003)	2009
Residents aware of at least two signs and symptoms of heart attack	98%	
Residents aware of at least two signs and symptoms of stroke	96%	

Source: * Wisconsin Behavioral Risk Factor Survey, 2003

10. Reduce coronary heart disease (CHD) deaths in Wisconsin by 10%.

11. Reduce stroke deaths in Wisconsin by 10%.

12. Reduce congestive heart failure (CHF) deaths in Wisconsin by 10%.

Age-Adjusted Death Rate For Cardiovascular Diseases In Wisconsin*

	2003*	2009
Death Rate of CHD among Wisconsin adults	135	122
Death Rate of stroke among Wisconsin adults	52	47
Death Rate of CHF among Wisconsin adults	22	20

Note: * Death Rate is age-adjusted by US 2000 population and expressed in deaths/100,000 population

Reduce ethnic/racial disparities

13. Reduce ethnic/racial disparities in deaths due to CHD, stroke, and CHF.

Age-Adjusted Death Rates for CHD, Stroke, and CHF Among Target Populations*

	2003*	2009
Death Rate of CHD death among American Indians	198	178
Death Rate of stroke death among African Americans	83	74
Death Rate of CHF death among American Indians	28	25

Note: * Death Rate is age-adjusted by US 2000 population and expressed in deaths/100,000 population